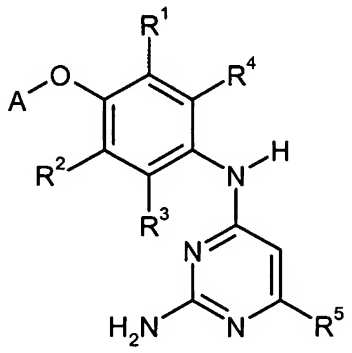
LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

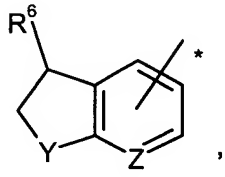
1. (Original) A compound of the formula



(I),

in which

A represents a radical



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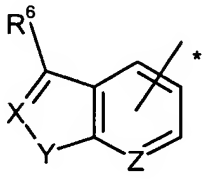

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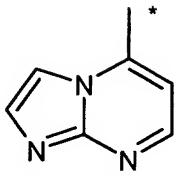


in which

X represents N or C-H,

Y represents N-R^7, O or S

in which

R^7 represents hydrogen, benzyl, phenyl, (C_1-C_6)-alkyl or (C_3-C_8)-cycloalkyl,

where alkyl and cycloalkyl for their part may be substituted by fluorine, hydroxyl, amino, carboxyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino or morpholinyl,

Z represents N or C-H,

R^6 represents hydrogen, halogen, trifluoromethyl, (C_1-C_6)-alkylamino or W-R^7,

in which

W represents NH, O or a bond,

R^7 is as defined above

and

* denotes the point of attachment to the phenolic oxygen,

R^1 and R^2 independently of one another represent hydrogen, halogen or cyano,

R^3 and R^4 independently of one another represent hydrogen, fluorine or chlorine,

R^5 represents a radical selected from the group consisting of:

hydrogen, hydroxyl, halogen, trifluoromethyl,

(C_3-C_8)-cycloalkyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy,

where cycloalkyl, alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkoxycarbonyl, (C_6-C_{10})-aryl, NR^8R^9 or $C(=O)NR^8R^9$,

in which

R^8 and R^9 independently of one another represent hydrogen, (C_1-C_8)-alkyl, optionally (C_1-C_6)-alkyl-substituted (C_3-C_6)-cycloalkyl, optionally halogen-substituted (C_6-C_{10})-aryl or 5- to 10-membered heteroaryl

or

R^8 and R^9 together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C_1-C_6)-alkyl, (C_1-C_6)-alkanoyl or (C_1-C_6)-alkoxycarbonyl,

(C_6-C_{10})-aryl, (C_6-C_{10})-aryloxy, 5- to 10-membered heteroaryl, 5- to 10-membered heteroaryloxy, 5- to 10-membered heterocyclyl which is attached via a carbon atom,

where aryl, aryloxy, heteroaryl, heteroaryloxy and heterocyclyl for their part may be substituted by halogen, cyano, nitro, carboxyl, amino, trifluoromethyl, optionally hydroxyl-substituted (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino, (C_1-C_6)-alkanoyl, (C_1-C_6)-alkoxycarbonyl, (C_1-C_6)-alkanoylamino, (C_1-C_6)-alkoxycarbonylamino or 5- or 6-membered heterocyclyl,

$NR^{10}R^{11}$

in which

R^{10} and R^{11} independently of one another represent hydrogen, $(C_1$-$C_6)$-alkyl, $(C_3$-$C_8)$-cycloalkyl, $(C_6$-$C_{10})$-aryl or 5- to 10-membered heteroaryl,

where alkyl and cycloalkyl for their part may be substituted by hydroxyl, $(C_1$-$C_6)$-alkoxy, $(C_6$-$C_{10})$-aryl, 5- to 10-membered heteroaryl or $NR^{15}R^{16}$,

in which

R^{15} and R^{16} independently of one another represent hydrogen, $(C_1$-$C_6)$-alkyl, $(C_3$-$C_6)$-cycloalkyl, $(C_6$-$C_{10})$-aryl or 5- or 6-membered heteroaryl

or

R^{15} and R^{16} together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by $(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkanoyl or $(C_1$-$C_6)$-alkoxycarbonyl,

and

aryl and heteroaryl for their part may be substituted by halogen, hydroxyl, amino, cyano, trifluoromethyl, $(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkoxy, $(C_1$-$C_6)$-alkylamino or $(C_1$-$C_6)$-alkanoylamino,

or

R^{10} and R^{11} together with the nitrogen atom to which they are attached form a 4- to 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by fluorine, hydroxyl, carboxyl, 5- to 7-membered heterocyclyl which may contain one or two further heteroatoms N and/or O in the ring and which for its part may be substituted by $(C_1$-$C_4)$-alkyl or $(C_1$-$C_4)$-alkoxycarbonyl, $(C_1$-$C_4)$-alkoxy, optionally hydroxyl-, $(C_1$-$C_4)$-alkoxy- or $NR^{17}R^{18}$-substituted $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-alkanoyl, $(C_1$-$C_4)$-alkoxyc

where

R^{12} and R^{13} independently of one another represent hydrogen, $(C_1$-$C_6)$-alkyl, $(C_1$-$C_4)$-alkoxycarbonyl, $(C_3$-$C_8)$-cycloalkyl or $(C_1$-$C_4)$-alkanoyl

or

R^{12} and R^{13} together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by $(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkanoyl or $(C_1$-$C_6)$-alkoxycarbonyl,

and

R^{17} and R^{18} independently of one another represent hydrogen, optionally hydroxyl-substituted $(C_1$-$C_6)$-alkyl, $(C_3$-$C_6)$-cycloalkyl, $(C_6$-$C_{10})$-aryl or 5- or 6-membered heteroaryl

or

R^{17} and R^{18} together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may

contain a further heteroatom O or N in the ring and which may be substituted by (C_1-C_6)-alkyl, (C_1-C_6)-alkanoyl or (C_1-C_6)-alkoxycarbonyl,

or

R^{10} and R^{11} together with the nitrogen atom to which they are attached form a 7- to 12-membered bicyclic or tricyclic heterocycle which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring and which may be substituted by fluorine, (C_1-C_4)-alkyl, (C_1-C_4)-alkoxycarbonyl, (C_1-C_4)-alkanoyl or benzyl,

and $C(=O)R^{14}$,

in which

R^{14} represents (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino or a 5- to 10-membered mono- or bicyclic heterocycle which is attached via a nitrogen atom, which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring,

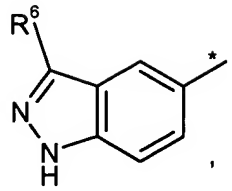
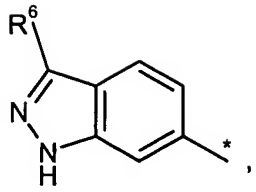
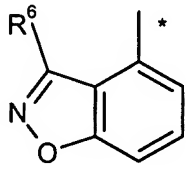
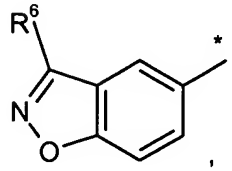
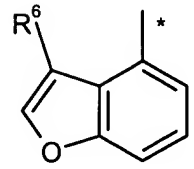
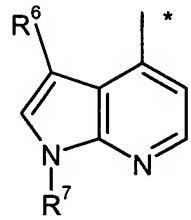
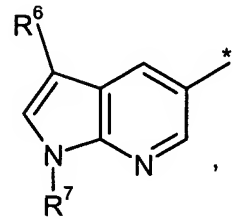
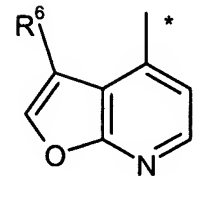
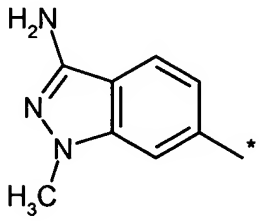
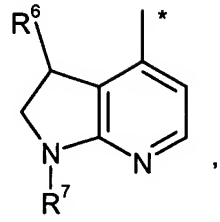
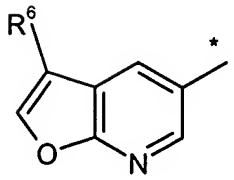
where alkylamino for its part may be substituted by a 5- or 6-membered heterocycle,

or a salt, a hydrate, a hydrate of a salt or a solvate thereof.

2. (Original) The compound as claimed in claim 1

in which

A represents a radical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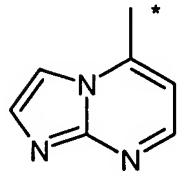


in which

R^6 represents hydrogen, $(C_1\text{-}C_4)$-alkyl or NH-R^7,

R^7 represents hydrogen or $(C_1\text{-}C_4)$-alkyl

and

* denotes the point of attachment to the phenolic oxygen,

R^1 and R^2 independently of one another represent hydrogen, fluorine or chlorine,

R^3 and R^4 independently of one another represent hydrogen or fluorine,

R^5 represents a radical selected from the group consisting of:

hydrogen, chlorine, (C_3-C_8)-cycloalkyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy,

where alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, (C_1-C_4)-alkoxy, (C_1-C_4)-alkoxycarbonyl, NR^8R^9 or $C(=O)NR^8R^9$,

in which

R^8 and R^9 independently of one another represent hydrogen, (C_1-C_8)-alkyl, optionally (C_1-C_4)-alkyl-substituted (C_3-C_6)-cycloalkyl, optionally halogen-substituted phenyl or 5- or 6-membered heteroaryl

or

R^8 and R^9 together with the nitrogen atom to which they are attached form a morpholine, piperazine, piperidine or pyrrolidine ring, where the rings for their part may be substituted by (C_1-C_4)-alkyl,

(C_6-C_{10})-aryl, 5- or 6-membered heteroaryl, 5- or 6-membered heterocyclyl which is attached via a carbon atom,

where aryl, heteroaryl and heterocyclyl for their part may be substituted by halogen, cyano, nitro, carboxyl, amino, trifluoromethyl, optionally hydroxyl-substituted (C_1-C_4)-alkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-alkylamino, (C_1-C_4)-alkanoyl, (C_1-C_4)-alkoxycarbonyl, (C_1-C_4)-alkanoylamino, (C_1-C_4)-alkoxycarbonylamino or 6-membered heterocyclyl,

$NR^{10}R^{11}$

in which

R^{10} and R^{11} independently of one another represent hydrogen, (C_1-C_6)-alkyl, (C_3-C_8)-cycloalkyl, phenyl or 5- or 6-membered heteroaryl,

where alkyl and cycloalkyl for their part may be substituted by hydroxyl, (C_1-C_4)-alkoxy, phenyl, 5- or 6-membered heteroaryl or $NR^{15}R^{16}$,

in which

R^{15} and R^{16} independently of one another represent hydrogen, (C_1-C_4)-alkyl, (C_3-C_6)-cycloalkyl, phenyl or 5- or 6-membered heteroaryl

or

R^{15} and R^{16} together with the nitrogen atom to which they are attached form a morpholine, piperazine, piperidine or pyrrolidine ring, where the rings for their part may be substituted by (C_1-C_4)-alkyl,

and

phenyl and heteroaryl for their part may be substituted by fluorine, chlorine, hydroxyl, amino, cyano, trifluoromethyl, (C_1-C_4)-alkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-alkylamino or (C_1-C_4)-alkanoylamino,

or

R^{10} and R^{11} together with the nitrogen atom to which they are attached form a 4- to 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by fluorine, hydroxyl, carboxyl, 5- to 7-membered heterocyclyl which may contain one or two further heteroatoms N and/or O in the ring and which for its part may be substituted by (C_1-C_4)-alkyl or (C_1-C_4)-alkoxycarbonyl, (C_1-C_4)-alkoxy, optionally hydroxyl-, (C_1-C_4)-alkoxy- or $NR^{17}R^{18}$-substituted (C_1-C_4)-alkyl, (C_1-C_4)-alkanoyl, (C_1-C_4)-alkoxycarbonyl or $NR^{12}R^{13}$,

where

R^{12} and R^{13} independently of one another represent hydrogen or (C_1-C_4)-alkyl

or

R^{12} and R^{13} together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C_1-C_6)-alkyl, (C_1-C_6)-alkanoyl or (C_1-C_6)-alkoxycarbonyl,

and

R^{17} and R^{18} independently of one another represent hydrogen, optionally hydroxyl-substituted (C_1-C_4)-alkyl or phenyl

or

R^{17} and R^{18} together with the nitrogen atom to which they are attached form a pyrrolidine ring,

or

R^{10} and R^{11} together with the nitrogen atom to which they are attached form a 7- to 12-membered bicyclic or tricyclic heterocycle which is fused or spirocyclic, which may have one or two further heteroatoms from the group consisting of N and O in the ring and which may be substituted by (C_1-C_4)-alkyl, (C_1-C_4)-alkoxycarbonyl, (C_1-C_4)-alkanoyl or benzyl,

and $C(=O)R^{14}$

in which

R^{14} represents (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino or a 5- to 10-membered mono- or bicyclic heterocycle which is attached via a nitrogen atom, which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring,

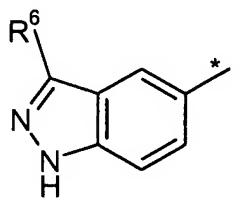
where alkylamino for its part may be substituted by a 5- or 6-membered heterocyclyl,

or a salt, a hydrate, a hydrate of a salt or a solvate thereof.

3. (Previously presented) The compound as claimed in claim 1

in which

A represents a radical



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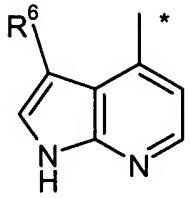


in which

R^6 represents hydrogen or methyl

and

* denotes the point of attachment to the phenolic oxygen,

R^1 and R^2 independently of one another represent hydrogen, fluorine or chlorine,

R^3 and R^4 represent hydrogen,

R^5 represents a radical selected from the group consisting of:

hydrogen, chlorine, cyclohexyl, $(C_1\text{-}C_4)$-alkyl, $(C_1\text{-}C_4)$-alkoxy,

where alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, $(C_1\text{-}C_4)$-alkoxy, methyloxycarbonyl, ethyloxycarbonyl, NR^8R^9 or $C(=O)NR^8R^9$,

in which

R^8 and R^9 independently of one another represent hydrogen, (C_1-C_8)-alkyl, cyclopropyl, optionally methyl-substituted cyclopentyl or optionally fluorine-substituted phenyl

or

R^8 and R^9 together with the nitrogen atom to which they are attached form a piperidine, 2-methylpiperidine or 2,6-dimethylpiperidine ring,

phenyl, pyridyl, pyrrolyl, piperidin-3-yl, piperidin-4-yl, pyrrolidin-2-yl,

where phenyl, pyridyl and pyrrolyl for their part may be substituted by fluorine, chlorine, bromine, cyano, nitro, trifluoromethyl, methyl, hydroxymethyl, methoxy, dimethylamino or morpholinyl,

and

piperidin-3-yl, piperidin-4-yl and pyrrolidin-2-yl for their part may be substituted by methyl, ethyl, n-propyl, isopropyl, methylcarbonyl or ethylcarbonyl,

$NR^{10}R^{11}$

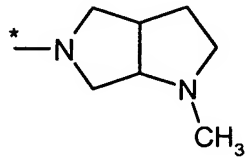
in which

R^{10} and R^{11} independently of one another represent hydrogen, (C_1-C_4)-alkyl, 3-hydroxypropyl, 2-hydroxycyclohexyl, 2-aminocyclohexyl, phenyl, pyridyl or pyrazolyl,

where phenyl and pyridyl for their part may be substituted by chlorine, hydroxyl, amino, cyano, methyl or methoxy,

or

R^{10} and R^{11} together with the nitrogen atom to which they are attached form a piperazine, 3-methylpiperazine, 3,5-dimethylpiperazine, 4-isobutylpiperazine, morpholine, pyrrolidine, 3-aminopyrrolidine, 3-methylaminopyrrolidine, 3-(*N,N*-dimethylamino)pyrrolidine, 2-aminomethylpyrrolidine, 3-hydroxypyrrolidine, 2-hydroxymethylpyrrolidine or 2-methoxymethylpyrrolidine ring or a radical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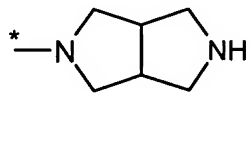
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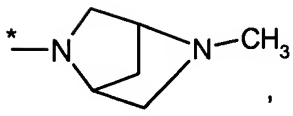
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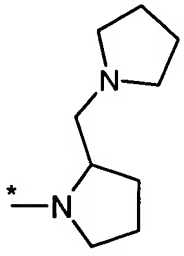
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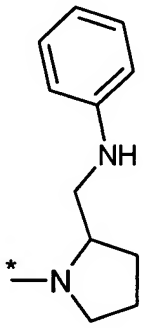
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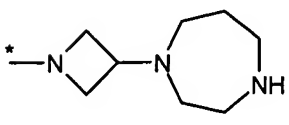
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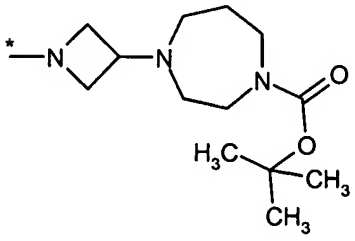
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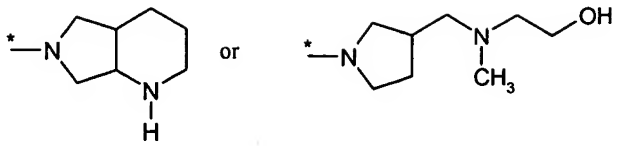


in which

* denotes the point of attachment to the pyrimidine ring,

and $C(=O)R^{14}$

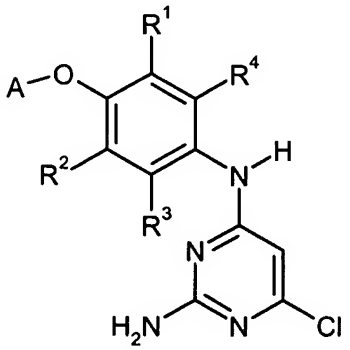
in which

R^{14} represents methoxy, piperidinyl-N-ethylamino, piperidinyl or piperazinyl,

or a salt, a hydrate, a hydrate of a salt or a solvate thereof.

4. (Original) A process for preparing compounds as defined in claim 1, characterized in that either

[A] compounds of the formula (II)



(II),

in which

A, R^1, R^2, R^3 and R^4 are as defined in claim 1

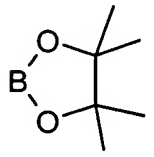
are reacted with compounds of the formula (III)

$$R^5—X^1 \qquad (III),$$

in which

R^5 is as defined in claim 1 and

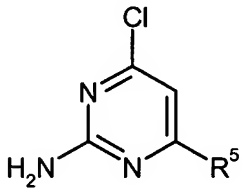
X^1 represents hydrogen, $B(OH)_2$ or a boronic acid ester such as



,

or

[B] compounds of the formula (IV)

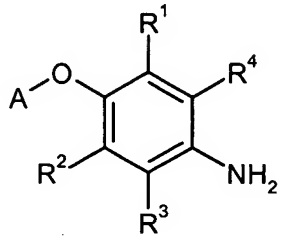


(IV),

in which

R^5 is as defined in claim 1

are reacted with compounds of the formula (V)



(V),

in which

A, R^1, R^2, R^3 and R^4 are as defined in claim 1.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Previously presented) A method for the treatment and/or prophylaxis of cardiovascular disorders wherein a cardiovascularly effective amount of a compound as defined in claim 1 is used.

9. (Previously presented) A pharmaceutical composition comprising a compound as defined in claim 1 and a further active compound.

10. (Previously presented) A pharmaceutical composition comprising a compound as defined in claim 1 in combination with an inert nontoxic pharmaceutically acceptable auxiliary.

11. (Previously presented) The method of claim 8, wherein the cardiovascular disorder is erectile dysfunction.